

ABSTRACT

A component capable of being exposed to a plasma in a process chamber has a structure having an electroplated coating comprising yttrium-containing species. The electroplated coating is resistant to corrosion in the plasma, and can have a compositional gradient of yttrium-containing species through a thickness of the coating. In one embodiment, the coating is formed by electroplating a layer comprising yttrium onto the surface, and then electroplating a second layer onto the first layer, and annealing the first and second layers. The second layer can comprise aluminum or zirconium. In another embodiment, the coating is formed by electroplating a layer comprising a mixture of aluminum and yttrium onto the surface and annealing the layer.